

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Phyllis N. Hughes Examiner #: 78753 Date: 8/12/02  
Art Unit: 1644 Phone Number 30 18-4844 Serial Number: 10/071,247  
Mail Box and Bldg/Room Location: \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: fluorination of proteins & peptide for F-18 positron emission tomography  
Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: 8/3/97

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please search attached Claims 13-15.*

*CSG H 63 I 2, U 1, 2, 3*

Jan Delaval  
Reference Librarian  
Biotechnology & Chemical Library  
CM1 1E07 - 703-308-4498  
jan.delaval@uspto.gov

## STAFF USE ONLY

Searcher: Jan  
Searcher Phone #: 4498  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: 8/12/02  
Date Completed: 8/12/02  
Searcher Prep & Review Time: \_\_\_\_\_  
Clerical Prep Time: 15  
Online Time: 35

## Type of Search

NA Sequence (#) \_\_\_\_\_  
AA Sequence (#) ✓ \_\_\_\_\_  
Structure (#) \_\_\_\_\_  
Bibliographic \_\_\_\_\_  
Litigation \_\_\_\_\_  
Fulltext \_\_\_\_\_  
Patent Family \_\_\_\_\_  
Other \_\_\_\_\_

## Vendors and cost where applicable

STN ✓ \_\_\_\_\_  
Dialog \_\_\_\_\_  
Questel/Orbit \_\_\_\_\_  
Dr. Link ✓ \_\_\_\_\_  
Lexis/Nexis \_\_\_\_\_  
Sequence Systems ✓ \_\_\_\_\_  
WWW/Internet \_\_\_\_\_  
Other (specify) \_\_\_\_\_

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(FILE 'REGISTRY' ENTERED AT 17:36:08 ON 12 AUG 2002)  
DEL HIS

FILE 'HCAPLUS' ENTERED AT 17:36:25 ON 12 AUG 2002  
E US6187284/PN

L1 1 S E3  
E US6358489/PN  
L2 1 S E3  
E US97-057485/AP, PRN  
L3 1 S E5  
L4 1 S L1-L3  
SEL RN

FILE 'REGISTRY' ENTERED AT 17:37:28 ON 12 AUG 2002

L5 37 S E1-E37  
L6 3 S L5 AND SQL/FA

FILE 'HCAPLUS' ENTERED AT 17:39:56 ON 12 AUG 2002

E GRIFFITHS G/AU  
L7 120 S E3,E12,E31,E32  
E IMMUNOMEDIC/PA,CS  
L8 121 S E6-E20  
L9 183 S L7,L8 NOT L4  
L10 2 S L9 AND (F OR FLUORIN?) ()18  
L11 0 S L9 AND F18  
L12 181 S L9 NOT L10  
SEL RN L10

FILE 'REGISTRY' ENTERED AT 17:42:03 ON 12 AUG 2002

L13 85 S E1-E85  
L14 12 S L13 AND PROTEIN/FS

FILE 'HCAPLUS' ENTERED AT 17:42:53 ON 12 AUG 2002

SET SMARTSELECT ON  
L15 SEL L12 1- RN : 751 TERMS  
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 17:42:59 ON 12 AUG 2002

L16 751 S L15  
L17 152 S L16 AND PROTEIN/FS  
L18 152 S L17 NOT L6,L14  
L19 0 S L18 AND F/ELS  
L20 89 S L18 AND SQL<=10  
L21 48 S L20 NOT MULTICHAIN/NTE  
L22 17 S L21 NOT (PHENYLALAN? OR HISTID?)  
L23 1 S L22 AND C56H63I2N11O13  
E C56H63I2N11O13/MF  
E GYWGKGYW/SQEP  
L24 1 S E3  
L25 1 S L23,L24  
L26 89 S L18,L14,L6 AND S/ELS  
L27 77 S L26 AND 46.150.18/RID  
L28 77 S L27 AND NR>=2  
L29 57 S L28 AND NC4-C6/ES  
L30 13 S L29 NOT PHENYLALAN?  
L31 9 S L30 NOT PROL?  
L32 5 S L31 AND S>=2  
E CYS-TYR-TRP-GLY-CYS-GLY-TYR-TRP/SQEP  
E GLY-TYR-TRP-GLY-LYS-GLY-TYR-TRP/SQEP  
SAV L25 NEON071247/A

Jan Delaval  
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FILE 'HCAPLUS' ENTERED AT 17:52:46 ON 12 AUG 2002

L33 1 S L25  
L34 1 S L33 AND L7,L8

FILE 'USPATFULL, USPAT2' ENTERED AT 17:53:01 ON 12 AUG 2002

L35 1 S L25

=> fil reg

FILE 'REGISTRY' ENTERED AT 17:53:23 ON 12 AUG 2002

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STRUCTURE FILE UPDATES: 11 AUG 2002 HIGHEST RN 443634-39-7

DICTIONARY FILE UPDATES: 11 AUG 2002 HIGHEST RN 443634-39-7

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES  
for more information. See STNote 27, Searching Properties in the CAS  
Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d sqide can l25

L25 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 253197-60-3 REGISTRY

CN D-Tryptophan, N-acetylglycyl-3-iodo-D-tyrosyl-D-tryptophylglycyl-N6-acetyl-  
D-lysylglycyl-3-iodo-D-tyrosyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1: PN: WO9966951 PAGE: 61 claimed protein

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 8

NTE modified

type	location		description
terminal mod.	Gly-1	-	N-acetyl
modification	Tyr-2	-	iodo<I>
modification	Lys-5	-	acetyl<Ac>
modification	Tyr-7	-	iodo<I>

SEQ 1 GYWKGWY

=====

HITS AT: 1-8

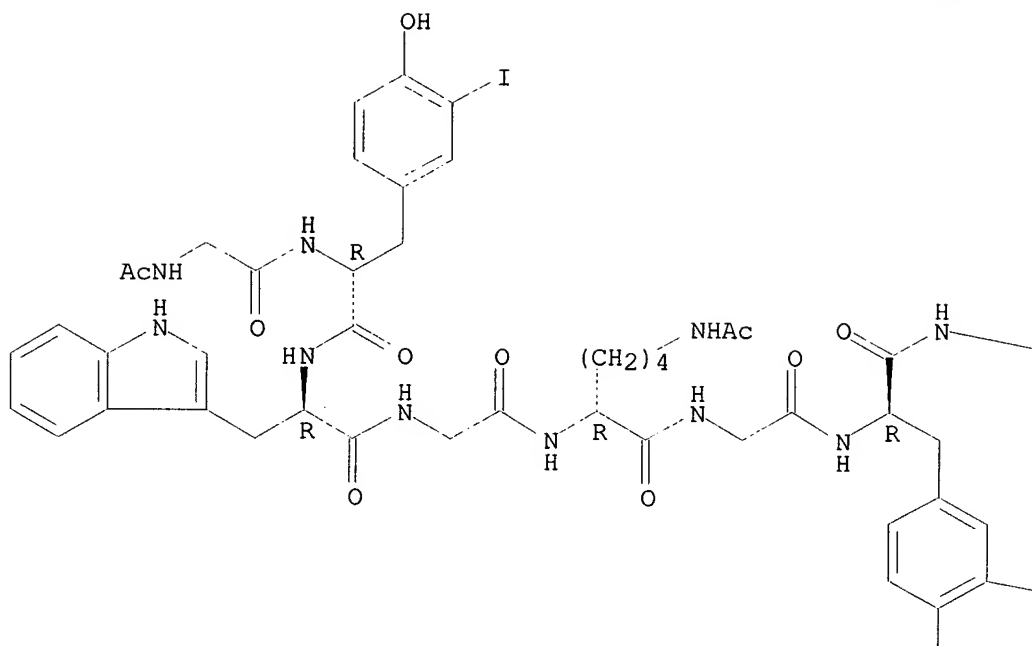
MF C56 H63 I2 N11 O13

SR CA

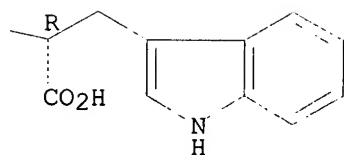
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



PAGE 2-A



## 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 132:69307

=&gt; fil hcaplus

FILE 'HCAPLUS' ENTERED AT 17:53:31 ON 12 AUG 2002

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FILE COVERS 1907 - 12 Aug 2002 VOL 137 ISS 7

FILE LAST UPDATED: 11 Aug 2002 (20020811/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=&gt; d all hitstr 134

L34 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:819263 HCAPLUS

DN 132:69307

TI Use of bispecific antibodies for pre-targeting diagnosis and therapy

IN Hansen, Hans J.; Griffiths, Gary L.; Leung, Shui-On; McBride, William J.; Qu, Zhengxing

PA Immunomedics, Inc., USA

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K039-00

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8, 9

FAN.CNT 14

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----		-----	-----	-----
PI	WO 9966951	A2	19991229	WO 1999-US13879	19990622
	WO 9966951	A3	20000615		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

AU 9945792            A1    20000110            AU 1999-45792        19990622  
 EP 1089766            A2    20010411            EP 1999-928808        19990622  
       R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
           IE, FI  
 JP 2002518460        T2    20020625            JP 2000-555637        19990622  
 PRAI US 1998-90142P    P    19980622  
 US 1998-104156P    P    19981014  
 WO 1999-US13879    W    19990622  
 OS    MARPAT 132:69307  
 AB    The present invention relates to a bispecific antibody or antibody  
       fragment having at least one arm that specifically binds a targeted tissue  
       and at least one other arm that specifically binds a targetable conjugate.  
       The targetable conjugate comprises a carrier portion which comprises or  
       bears at least one epitope recognizable by at least one arm of said  
       bispecific antibody or antibody fragment. The targetable conjugate  
       further comprises one or more therapeutic or diagnostic agents or enzymes.  
       The invention provides constructs and methods for producing the bispecific  
       antibodies or antibody fragments, as well as methods for using them.  
 ST    immunotargeted drug delivery bispecific antibody diagnosis  
 IT    Imaging agents  
       (MRI; bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Diagnosis  
       (agents; bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Chelating agents  
       Drug targeting  
       Genetic engineering  
       Molecular cloning  
       Radiotherapy  
       Test kits  
       Transcription initiation  
       Transduction, genetic  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Fusion proteins (chimeric proteins)  
       RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU  
       (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological  
       study); PREP (Preparation); PROC (Process); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Haptens  
       RL: BPR (Biological process); BSU (Biological study, unclassified); PEP  
       (Physical, engineering or chemical process); THU (Therapeutic use); BIOL  
       (Biological study); PROC (Process); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Chelates  
       RL: FMU (Formation, unclassified); THU (Therapeutic use); BIOL (Biological  
       study); FORM (Formation, nonpreparative); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Carbohydrates, biological studies  
       RL: PEP (Physical, engineering or chemical process); THU (Therapeutic  
       use); BIOL (Biological study); PROC (Process); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Peptides, biological studies  
       RL: PEP (Physical, engineering or chemical process); THU (Therapeutic  
       use); BIOL (Biological study); PROC (Process); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Radionuclides, biological studies  
       RL: PEP (Physical, engineering or chemical process); THU (Therapeutic  
       use); BIOL (Biological study); PROC (Process); USES (Uses)  
       (bispecific antibodies for pre-targeting diagnosis and therapy)  
 IT    Antibodies  
       RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU  
       (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological  
       study); PREP (Preparation); PROC (Process); USES (Uses)  
       (bispecific; bispecific antibodies for pre-targeting diagnosis and

therapy)

IT Toxicity  
(drug; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Immunoglobulins  
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(fragments; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Fissurella  
(hemocyanin of, conjugation of; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Antibodies  
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(humanized; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Drug delivery systems  
(immunoconjugates; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Enzymes, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(immunoconjugates; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Drug delivery systems  
(immunotargeted; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Hemocyanins  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(keyhole limpet, conjugation of; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Antibodies  
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(monoclonal; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Circulation  
(nonlocalized antibody clearing from; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Drug delivery systems  
(prodrugs; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Epitopes  
(site-specific; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Milk  
Plant (Embryophyta)  
(transgenic protein prodn. in; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Animal  
Bacteria (Eubacteria)  
Insect (Insecta)  
Mammal (Mammalia)  
(transgenic; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Embryo, animal  
(zygote, transduction of; bispecific antibodies for pre-targeting diagnosis and therapy)

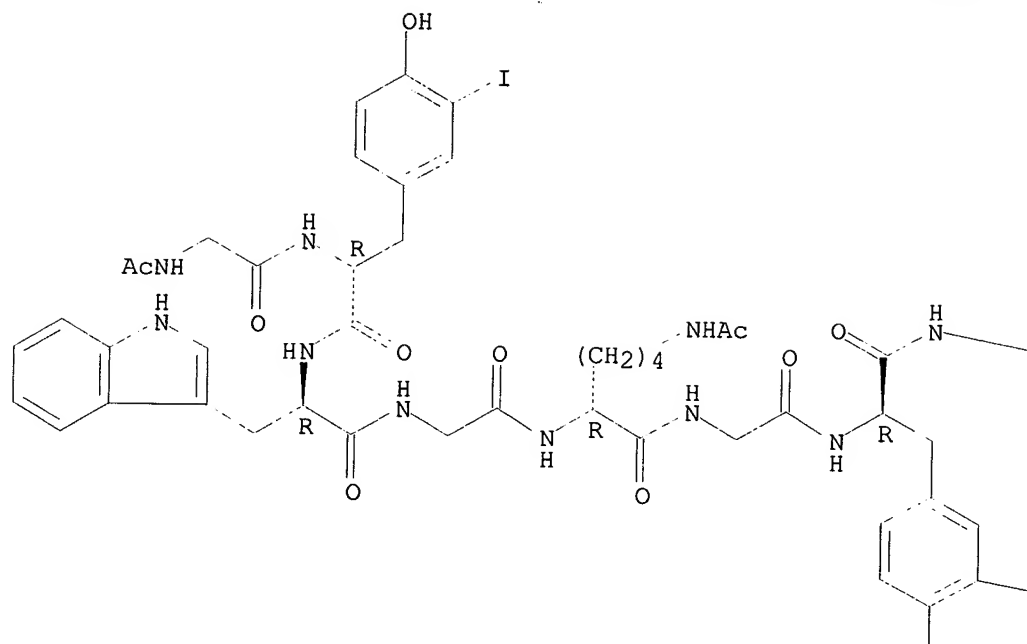
IT 9016-18-6D, Carboxylesterase, conjugates  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

- study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 253197-60-3P  
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 10098-91-6, Yttrium 90, reactions 14133-76-7, Technetium 99, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 249292-65-7DP, Bz-DTPA and thiosemicarbazonyloxyglyoxylcysteine conjugate  
253197-63-6P 253331-44-1DP, peptide conjugate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 67-43-6, Dtpa 56491-86-2, Nota 60239-18-1, Dota 60239-22-7, Teta 253197-61-4D, Thiosemicarbazonylglyoxylcysteine, derivs. and peptide conjugates 253197-62-5, Thiosemicarbazonylacetylcysteine  
RL: BPR (Biological process); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)  
(chelating agent; bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 7440-42-8, Boron, biological studies 14798-12-0, Boron 10, biological studies  
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(irradn. of; bispecific antibodies for pre-targeting diagnosis and therapy)
- IT 253197-60-3P  
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(bispecific antibodies for pre-targeting diagnosis and therapy)
- RN 253197-60-3 HCAPLUS
- CN D-Tryptophan, N-acetylglycyl-3-iodo-D-tyrosyl-D-tryptophylglycyl-N6-acetyl-D-lysylglycyl-3-iodo-D-tyrosyl- (9CI) (CA INDEX NAME)

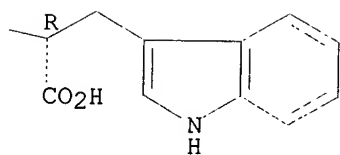
Absolute stereochemistry.



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PAGE 1-B



PAGE 2-A



=> fil uspatall

FILE 'USPATFULL' ENTERED AT 17:54:00 ON 12 AUG 2002

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FILE 'USPAT2' ENTERED AT 17:54:00 ON 12 AUG 2002

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=> d bib abs hitstr 135

L35 ANSWER 1 OF 1 USPATFULL

AN 2000:30637 USPATFULL

TI Chair floatation device

IN Walker, Willette, 1104 Davis Dr., Tampa, FL, United States 33619

PI US 6036563 20000314

AI US 1998-90142 19980604 (9)

DT Utility

FS Granted

EXNAM Primary Examiner: Basinger, Sherman

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN 4 Drawing Figure(s); 2 Drawing Page(s)

LN.CNT 359

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A new chair floatation device for permitting a person, such as a child, to float comfortably in a body of water. The inventive device includes a hollow body member with a back wall portion forming a backrest, a seat portion, and a front wall portion. A pair of spaced apart leg holes extend through the front wall portion. A tray extends from the front wall and a pair of spaced apart armrests extend between the back wall portion and the front wall portion. A seat harness member 50 extends between the front wall portion 32 and the back wall portion 26 while a belt strap harness 60 is also coupled to the body member.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 253197-60-3P

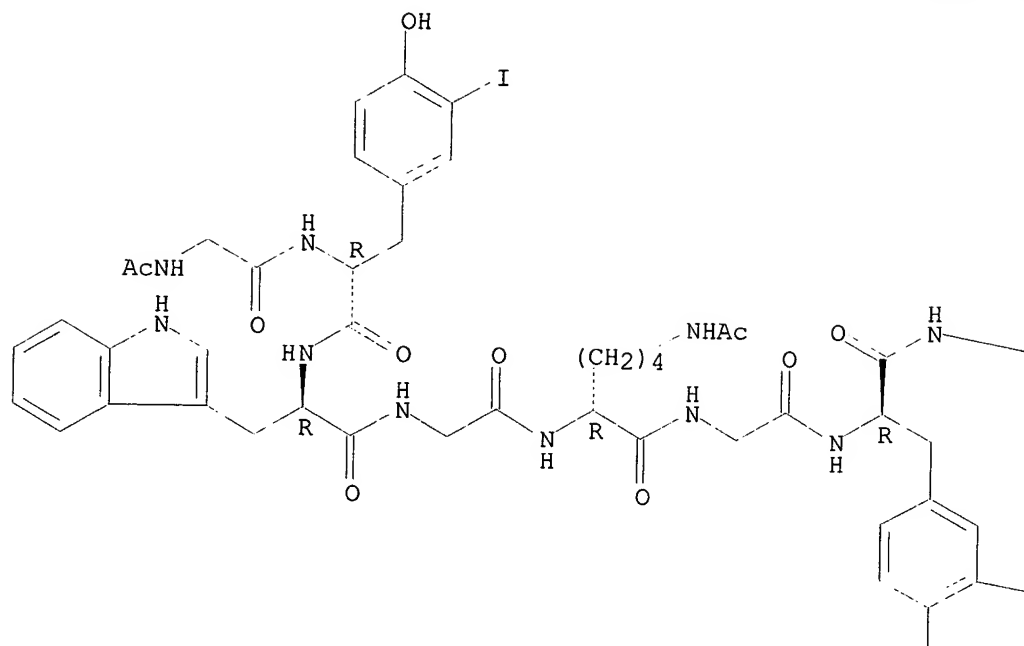
(bispecific antibodies for pre-targeting diagnosis and therapy)

RN 253197-60-3 USPATFULL

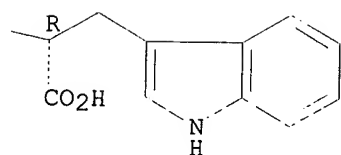
CN D-Tryptophan, N-acetylglycyl-3-iodo-D-tyrosyl-D-tryptophylglycyl-N6-acetyl-D-lysylglycyl-3-iodo-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 2-A



